

(=*F. necturorum*) individuals were found in the duodenum of *A. opacum*.

In summary, this work adds to the information on prevalence of *F. necturorum* in newts and is reminiscent of the study by Rankin (1937) demonstrating seasonal fluctuations in acanthocephalan populations. Our study also corroborates earlier findings on sex ratios of *F. necturorum* (Nickol and Heard, 1973), and the position of this parasite species in the host's intestine (Huffman, 1970). Information on mean intensities by host sex is new. West Virginia represents the northernmost extent of the range for *F. necturorum*, because this acanthocephalan species was not found in studies involving large sample sizes of newts from Massachusetts (Rankin, 1945) and New York (Fischthal, 1955). Additional work on *F. necturorum* populations from newts in other geographic regions should be encouraged.

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Research Note

Field Test of Activity of the Low Dose Rate (2.64 mg/kg) of Pyrantel Tartrate on *Anoplocephala perfoliata* in Thoroughbreds on a Farm in Central Kentucky

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ABSTRACT: A field test was done to evaluate activity on *Anoplocephala perfoliata* for the low dose rate

(2.64 mg/kg) of pyrantel tartrate fed once daily for 30 consecutive days to Thoroughbred mares ($n = 83$) and yearlings ($n = 58$) on a farm in central Kentucky. Tapeworm eggs were found pretreatment in feces of 35% of the mares and 33% of the yearlings. Posttreat-

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Table 1. Data on examination for tapeworm eggs in fecal samples of Farm A Thoroughbred mares treated with the low-level dose rate (2.64 mg/kg) of pyrantel tartrate.

Time relative to treatment (days)*	No. examined	No. infected (%)
0	83	29 (35)
35	77	0 (0)
72-86	45	1 (2)
153-167	69	0 (0)

* Treatment once daily for 30 consecutive days.

ment fecal samples for the mares were negative for tapeworm eggs at 35 days and 153-167 days postinitial treatment day (PIT) but positive (2%) at 72-86 days PIT. For the yearlings, posttreatment fecal samples were positive for tapeworm eggs at 2 days (71%), 7 days (33%), 14 days (13%), 21 days (7%), 35 days (2%), and 75 days (2%) but negative at 28 days PIT. Also, for the yearlings, about two-thirds of the feces was collected during the first 2 days PIT for examination for *A. perfoliata* specimens; 401 with scolices were found in 74% of these animals. Prevalence of *A. perfoliata* in the yearlings was 96%, as determined by findings eggs in feces pretreatment and 48 hr PIT in addition to specimens passed in feces.

KEY WORDS: *Anoplocephala perfoliata*, cestode, horses, Thoroughbreds, pyrantel tartrate, low dose rate, field test.

The cecal tapeworm (*Anoplocephala perfoliata*) may be detrimental to equids (Lyons et al., 1986). Limited data indicate that pyrantel tartrate (2.64 mg/kg) fed once daily for 30 consecutive days has good activity against *A. perfoliata* (Greiner and Lane, 1994). This regimen of ther-

apy was evaluated in the present study in a field test in Thoroughbred mares and yearlings on a farm (Farm A) in central Kentucky. Efficacy was determined by presence or absence of tapeworm eggs in fecal samples of these horses before and after treatment. Also, feces of the yearlings were examined for tapeworm specimens posttreatment to supplement egg data and as an indication of prevalence.

Pyrantel tartrate (Strongid® C, Pfizer, New York), at the low dose rate (2.64 mg/kg), was fed once daily for 30 consecutive days to mares ($n = 83$) and yearlings ($n = 58$; 26 colts and 32 fillies) on Farm A. Treatment of the mares was begun in early to mid-December 1995 and of the yearlings in early March 1996.

Specific data on examination of feces of mares (Table 1) and yearlings (Table 2) for *A. perfoliata* eggs pre- and posttreatment are recorded. About one-third of the horses had feces positive for tapeworm eggs before treatment. After treatment, eggs were found in feces for only 1 of 3 sample periods for the mares but were present in 6 of 7 samplings for the yearlings. The highest prevalence in yearlings for tapeworm eggs was 71% at 2 days postinitial treatment day (PIT); this was probably because of disintegration of *A. perfoliata* specimens and release of eggs in the feces.

For the yearlings, about two-thirds of the feces passed for the first 24 and 48-hr periods PIT was collected and washed through a 10-mesh sieve; *A. perfoliata* specimens ($n = 401$ with scolices) were recovered from feces of 74% of these animals. Some of these specimens were atypical; observations on them are reported else-

Table 2. Data on examination for tapeworm eggs in fecal samples of Farm A Thoroughbred yearlings treated with the low-level dose rate (2.64 mg/kg) of pyrantel tartrate.

Time relative to treatment (days)*	Colts		Fillies		All horses	
	Examined	Infected (%)	Examined	Infected (%)	Examined	Infected (%)
0	26	8 (31)	32	11 (34)	58	19 (33)
2	26	18 (69)	32	23 (72)	58	41 (71)
7	26	7 (27)	32	12 (38)	58	19 (33)
14	25	2 (8)	31	5 (16)	56	7 (13)
21	26	2 (8)†	31	2 (6)	57	4 (7)
28	26	0 (0)	27	0 (0)	53	0 (0)
35	26	0 (0)	30	1 (3)	56	1 (2)
75	26	1 (4)	31	0 (0)	57	1 (2)

* Treatment once daily for 30 consecutive days.

† Also 1 suspect egg.

where (Lyons et al., 1997). Combined data (presence of eggs in feces pretreatment and 48 hr PIT in addition to specimens passed in feces) indicate prevalence of 96% for *A. perfoliata* in the yearlings. This prevalence was much higher for *A. perfoliata* than found for specimens recovered from horses (50–60%) at necropsy in central Kentucky the last several years (Benton and Lyons, 1994). It is unknown whether Farm A is unique or sampling so many individuals in a closed system accounts for the high infection rate detected for *A. perfoliata*.

Interpretation of efficacy of the low dose level of pyrantel tartrate given once daily for 30 consecutive days on *A. perfoliata* is difficult based only on examination of feces for tapeworm eggs because false-negatives are common. However, the finding of specimens in feces of 74% of the yearlings over 2 days PIT and decline in presence of eggs in feces of both yearlings and mares, during and after treatment, indicate at least some drug activity. Also, these data seem to substantiate partially the good activity found by Greiner and Lane (1994). Further research,

such as controlled and critical tests, should be done to establish more definitive efficacy of the low dose rate of pyrantel tartrate on *A. perfoliata*.

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Research Note

Further Evaluation of Pyrantel Pamoate at the Therapeutic Dose Rate (6.6 mg base/kg) against *Anoplocephala perfoliata* in Horses

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ABSTRACT: Pyrantel pamoate paste was administered intraorally once at the therapeutic dose rate (6.6 mg base/kg) to 17 horses naturally infected with *Anoplocephala perfoliata*. Evaluation of drug activity by a modified critical test method indicated removals varying from 0 to 100% (aggregate average of 70%). Clearance was 0–27% ($n = 2$ horses), 36–44% ($n = 3$), 64–67% ($n = 2$), 75–88% ($n = 4$), 91–98% ($n = 3$), and 100% ($n = 3$).

KEY WORDS: *Anoplocephala perfoliata*, horses, ef-

ficacy, pyrantel pamoate paste, therapeutic dose rate, modified critical test.

Anoplocephala perfoliata is commonly found in equids and may cause health problems (Lyons et al., 1986; Benton and Lyons, 1994). Pyrantel pamoate, commercially available as a nematocide, has been reported as active on *A. perfoliata* at the therapeutic dose rate (6.6 mg base/kg) (aggregate average removal = 88%) and 13.2 mg base/kg dose rate (aggregate average removal = 93%); however, activity was quite variable for

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